

PATENT
USSN 08/974,584
015389-002950US
018/206p2

CLAIM AMENDMENTS

1 to 118. CANCELLED

119. (Currently amended) An isolated, synthetic, or recombinant polynucleotide encoding a protein that comprises an amino acid sequence at least 60% identical to SEQ. ID NO:118 when the entire sequence of said protein is optimally aligned with SEQ. ID NO:118, and with each of the following structures in the order amino terminus-(f)-(a)-(b)-(c)-(d)-(e)-carboxy terminus shown:

amino terminus:

either: Trp-R₁-X₇-R₁-R₁-R₂-X-Phe-Phe-Tyr-X-Thr-Glu-X₈-R₁-R₁-Arg-R₄-X₂-Trp

(SEQ. ID NO:16);

or: Trp-R₁-X₇-R₁-R₁-R₂-X-Phe-Phe-Tyr-X-Thr-Glu-X₉-R₃-R₃-Arg-R₄-X₂-Trp

(SEQ. ID NO:17);

a) X₃-Arg-X₂-Pro-Lys-X₃ (SEQ. ID NO:139) ;

b) X-Arg-X-Ile-X (SEQ. ID NO:143) ;

c) X₄-Phe-X₃-Asp-X₄-Tyr-Asp-X₂ (SEQ. ID NO:144) ;

d) Tyr-X₄-Gly-X₂-Gln-Gly-X₃-Ser-X₈ (SEQ. ID NO:146) ;

e) X₆-Asp-Asp-X-Leu-X₃ (SEQ. ID NO:147); and

f) either: Trp-R₄-X₂-R₄-R₄-R₂-X-Phe-Phe-Tyr-X-Thr-Glu-X₈-R₃-R₃-Arg-R₄-X₂-Trp

(SEQ. ID NO:16);

or: Trp-R₄-X₂-R₄-R₄-R₂-X-Phe-Phe-Tyr-X-Thr-Glu-X₉-R₃-R₃-Arg-R₄-X₂-Trp

(SEQ. ID NO:17);

carboxy terminus:

with the proviso that said protein is not a mouse telomerase reverse transcriptase protein, characterized as having at least 500 consecutive amino acids encoded by SEQ. ID NO:124;

wherein R₁ is Leu or Ile, R₂ is Gln or Arg, R₃ is Phe or Tyr, R₄ is Lys or His, X represents an unspecified amino acid ; and X_n represents the number n of consecutive unspecified amino acids;

and wherein the protein has telomerase catalytic activity when complexed with a telomerase RNA component.

120 to 126. CANCELLED

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127. *(Withdrawn)* A method for increasing proliferative capacity of a cell of a vertebrate species, comprising expressing the polynucleotide of claim 119 in the cell *in vitro*.
128. *(New)* An isolated, synthetic, or recombinant protein according to claim 119, complexed with a telomerase RNA component.
129. *(New)* An isolated, synthetic, or recombinant polynucleotide encoding a protein that comprises an amino acid sequence at least 80% identical to SEQ. ID NO:118 when the entire sequence of said protein is optimally aligned with SEQ. ID NO:118, each of the following structures in the order shown:

amino terminus;

either: Trp-R₁-X₇-R₁-R₁-R₂-X-Phe-Phe-Tyr-X-Thr-Glu-X₆-R₃-R₃-Arg-R₄-X₂-Trp

(SEQ. ID NO:16),

or: Trp-R₁-X₇-R₁-R₁-R₂-X-Phe-Phe-Tyr-X-Thr-Glu-X₆-R₃-R₃-Arg-R₄-X₂-Trp

(SEQ. ID NO:17);

X₃-Arg-X₂-Pro-Lys-X₃ (SEQ. ID NO:139);

X-Arg-X-Ile-X (SEQ. ID NO:143);

X₄-Phe-X₃-Asp-X₄-Tyr-Asp-X₂ (SEQ. ID NO:144);

Tyr-X₄-Gly-X₂-Gln-Gly-X₃-Ser-X₆ (SEQ. ID NO:146);

X₆-Asp-Asp-X-Leu-X₃ (SEQ. ID NO:147);

carboxy terminus;

wherein R₁ is Leu or Ile, R₂ is Gln or Arg, R₃ is Phe or Tyr, R₄ is Lys or His, X represents an unspecified amino acid, and X_n represents the number n of consecutive unspecified amino acids; and wherein the protein has telomerase catalytic activity when complexed with a telomerase RNA component.

130. *(New)* An isolated, synthetic, or recombinant protein according to claim 129, comprising an amino acid sequence at least 95% identical to SEQ. ID NO:118.
131. *(New) (Withdrawn)* A method for increasing proliferative capacity of a cell of a vertebrate species, comprising genetically altering the cell *in vitro* to express the polynucleotide of claim 129.